Amendments to the Claims

1. (Currently Amended) A compound of the following formula:

or a pharmaceutically acceptable salt or N-oxide thereof; wherein

A is <u>2-furanyl</u>;

B is N;

each of R² and R³ is independently hydrogen <u>or</u> alkyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, or heteroaralkyl;

each of X^1 and X^2 is independently hydrogen, C_{1-6} alkylene, C_{2-6} alkenylene, C_{2-6} alkynylene or a bond;

L is a bond or a linker selected from the group consisting of:

$$(R^{1})_{m} \longrightarrow (R^{2})_{q} \longrightarrow (R^{2})_{m} \longrightarrow (R^{2})_{q} \longrightarrow (R^{2})_{m} \longrightarrow$$

wherein:

each of R' and R", independently, is hydrogen, alkyl, alkenyl, alkynyl, alkoxy, acyl, halo, hydroxy, amino, nitro, oxo, thioxo, cyano, guanadino, amidino, carboxy, sulfo, sulfoxy, mercapto, alkylsulfanyl, alkylsulfinyl, alkylsulfonyl, aminocarbonyl, alkylcarbonylamino, alkylsulfonylamino, alkoxycarbonyl, alkylcarbonyloxy, urea, thiourea, sulfamoyl, sulfamide, carbamoyl, cycloalkyl, cycloalkyloxy, cycloalkylsulfanyl, heterocycloalkyl, heterocycloalkyloxy, heterocycloalkylsulfanyl, aryl, aryloxy, arylsulfanyl, aroyl, heteroaryl,

heteroaryloxy, heteroarylsulfanyl, or heteroaroyl; provided that two adjacent R' groups can join together to form a 4- to 8-membered optionally substituted cyclic moiety;

$$X^a$$
 is $-C(R^2)(R^3)$ -, $-S$ -, $-SO$ -, or $-SO_2$ -; X^b is $-C(R^2)(R^3)$ -, $-NR^2$ -, $-O$ -, $-S$ -, $-SO$ -, or $-SO_2$ -; each of p, q, m and m1, independently, is 0-3; r is 1 or 2; n1 is 0-6; and n2 is 2-6;

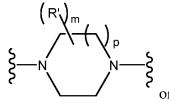
Y is $-C(R^2)(R^3)$ -, -O-, -S-, -SO-, -SO₂-, -CO-, -CO₂-, or a bond; and

R¹ is alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, aryl, aralkyl, heterocyclyl, or heterocycloalkyl;

provided that

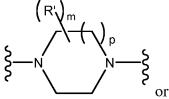
(1) when each of X^1 is a bond and L is a 4- to 6-membered saturated heterocyclic group selected from the group consisting of:

- (2) when L is a bond, X¹ is an alkynylene.
- 2. (Original) The compound of claim 1, wherein X^1 is C_{2-6} alkynylene.



- 3. (Currently Amended) The compound of claim 2, wherein L is a bond. [[;]]
- 4. (Original) The compound of claim 2, wherein X^2 is C_{1-4} alkylene or a bond.

- 5. (Original) The compound of claim 2, wherein Y is a bond.
- 6. (Canceled)
- 7. (Original) The compound of claim 2, wherein R¹ is alkyl, cycloalkyl, aryl, heterocycloalkyl, or heteroaryl.
- 8. (Original) The compound of claim 7, wherein R¹ is optionally substituted with alkyl, halo, hydroxy or phenyl.



9. (Currently Amended) The compound of claim 2, wherein L is a bond; X^2 is C_{1-4} alkylene or a bond; Y is a bond; each of R^2 -and R^3 -is independently hydrogen or alkyl; R^1 is alkyl, cycloalkyl, aryl, heterocycloalkyl, or heteroaryl, each of which being optionally substituted with alkyl, halo, hydroxy, or phenyl; A is heteroary; and B is N.

$$(R')_{m} \xrightarrow{\text{A}} X^{b} \xrightarrow{\text{A}} Q$$

10. (Original) The compound of claim 1, wherein L is

$$(R')_{m} \xrightarrow{X^{b}}_{q} \xrightarrow{N}_{q} \xrightarrow{N}_{$$

- 11. (Original) The compound of claim 10, wherein X^b is $-C(R^2)(R^3)$ or $-NR^2$ -.
- 12. (Original) The compound of claim 11, wherein X^b is $-C(R^2)(R^3)$ -.
- 13. (Original) The compound of claim 12, wherein p is 0-1 and q is 1.
- 14. (Original) The compound of claim 13, wherein n1 is 1-4 and n2 is 2-4.
- 15. (Original) The compound of claim 14, wherein X^1 is C_{1-6} alkylene or a bond.
- 16. (Original) The compound of claim 14, wherein X^2 is C_{1-6} alkylene or a bond.
- 17. (Original) The compound of claim 14, wherein Y is –SO₂-, -CO-, -CO₂-, or a bond.
- 18. (Canceled)

- 19. (Original) The compound of claim 14, wherein R¹ is aryl or heteroaryl, each of which being optionally substituted with alkyl, halo, hydroxy, or phenyl.
- 20. (Currently Amended) The compound of claim 14, wherein each of X^1 and X^2 is independently C_{1-6} alkylene or a bond; Y is $-SO_2$ -, -CO-, $-CO_2$ -, or a bond; each of R^2 and R^3 is independently hydrogen or alkyl; and R^1 is aryl or heteroaryl, each of which being optionally substituted with alkyl, halo, hydroxy, or phenyl.
- 21. (Currently Amended) The compound of claim 14, wherein L is

$$(R')_{m} \xrightarrow{\text{\backslash}} p \xrightarrow{\text{\backslash}} q \xrightarrow{\text{\backslash}} R^{2}$$

X; X^1 is a bond, X^2 is C_{1-4} alkylene; Y is a bond; each of \mathbb{R}^2

and R^3 is independently hydrogen or alkyl; R^1 is anylor heteroaryl, each of which being optionally substituted with alkyl, halo, hydroxy, or phenyl; A is heteroaryl; and B is N.

22. (Original) The compound of claim 1, wherein L is

- 23. (Original) The compound of claim 22, wherein X^1 is C_{1-6} alkylene, C_{2-6} alkynylene, or a bond.
- 24. (Original) The compound of claim 22, wherein X^2 is C_{1-6} alkylene or a bond.

a]pyrimidin-5,7-diamine;

- 25. (Original) The compound of claim 22, wherein Y is –SO₂-, -CO-, -CO₂-, or a bond.
- 26. (Canceled)
- 27. (Original) The compound of claim 22, wherein R¹ is alkyl, cycloalkyl, aryl, heterocycloalkyl, or heteroaryl.
- 28. (Original) The compound of claim 27, wherein R¹ is optionally substituted with alkyl, halo, hydroxy or phenyl.
- 29. (Currently Amended) The compound of claim 22, wherein X^1 is C_{1-6} alkylene, C_{2-6} alkynylene, or a bond, X^2 is C_{1-6} alkylene or a bond; Y is $-SO_2$ -, -CO-, $-CO_2$ -, or a bond; each of R^2 and R^3 is independently hydrogen or alkyl; R^1 is alkyl, cycloalkyl, aryl, heterocycloalkyl, or heteroaryl, each of which is being optionally substituted with alkyl, halo, hydroxy, or phenyl; A is heteroaryl; and B is N.
- 30. (Original) The compound of claim 1, said compound being 2-furan-2-yl-N⁵-[1-(5-methyl-isoxazol-3-ylmethyl)-pyrrolidin-2-ylmethyl]- [1,2,4]triazolo[1,5-a]pyridmidine-5,7-diamine; 2-furan-2-yl-N⁵-methyl-N⁵-[1-(5-methyl-isoxazol-3-ylmethyl)-pyrrolidin-2-ylmethyl]- [1,2,4]triazolo[1,5-a]pyridmidine-5,7-diamine; N⁵-[1-(2,5-difluoro-benzyl)-pyrrolidin-2-ylmethyl]-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; 5-{3-[4-(2,4-difluoro-phenyl)-piperaziny-1-yl]prop-1-ynyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; 5-{3-[4-(2,4-difluoro-phenyl)-piperaziny-1-yl]propyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; 5-{3-[4-(2,4-difluoro-phenyl)-piperaziny-1-yl]ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine;

 N^5 -{2-[4-(2,4-difluoro-phenyl)-piperaziny-1-yl]ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine;

2-furan-2-yl-N⁵-(1-furan-2-ylmethyl-pyrrolidin-2-ylmethyl)-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -[1-((2-fluorobenzyl)-pyrrolidin-2-ylmethyl)-2-furan-2-yl]-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

2-furan-2-yl-N⁵-(1-pyridin-2-ylmethyl-pyrrolidin-2-ylmethyl)-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

2-furan-2-yl-N⁵-(1-pyridin-4-ylmethyl-pyrrolidin-2-ylmethyl)-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

2-furan-2-yl-N⁵-(1-(2,3,6-trifluorobenzyl)-pyrrolidin-2-ylmethyl)-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 $\label{eq:N5-section} N^5-[1-(2-chloro-pyridin-4-ylmethyl)-pyrrolidin-2-ylmethyl)-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;$

1-(7-amino-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-5-ylethynyl)-cyclopentanol;

 $1\hbox{-}(7\hbox{-}amino\hbox{-}2\hbox{-}furan\hbox{-}2\hbox{-}yl\hbox{-}[1,2,4]triazolo[1,5\hbox{-}a]pyrimidin\hbox{-}5\hbox{-}ylethynyl)\hbox{-}cyclohexanol;}$

 $2\text{-furan-}2\text{-yl-N}^5\text{-}\{2\text{-}[4\text{-}(2,4,6\text{-trifluorophenyl})\text{-piperaziny-}1\text{-yl}]\text{-ethyl}\}\text{-}[1,2,4]\text{triazolo}[1,5\text{-a}]\text{pyrimidine-}5,7\text{-diamine};$

 N^5 -{2-[4-(2,3-difluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

2-furan-2-yl-N⁵-{2-[4-(3,4,5-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

2-furan-2-yl-N⁵-{2-[4-(2,3,6-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -{2-[4-(3,5-difluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -{2-[4-(2,6-difluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -{2-[4-(2,5-difluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

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N^5-\{2-[4-(2-fluorophenyl)-piperazin-1-yl]-ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; \\N^5-\{2-[4-(4-fluorophenyl)-piperazin-1-yl]-ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; \\N^5-\{2-[4-(3,5-dichlorophenyl)-piperazin-1-yl]-ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; \\2-furan-2-yl-N^5-\{2-[4-(2,3,4-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; \\2-furan-2-yl-N^5-\{2-[4-(2,4,5-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; and <math display="block">N^5-\{2-[4-(4-chloro-2-fluorophenyl)-piperazin-1-yl]-ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine, [[;]]
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- 31. (Original) The compound of claim 1, said compound being
 - 2-furan-2-yl-N⁵-[1-(5-methyl-isoxazol-3-ylmethyl)-pyrrolidin-2-ylmethyl]-
 - [1,2,4]triazolo[1,5-a]pyridmidine-5,7-diamine;
 - 2-furan-2-yl-N⁵-methyl-N⁵-[1-(5-methyl-isoxazol-3-ylmethyl)-pyrrolidin-2-ylmethyl]-
 - [1,2,4]triazolo[1,5-a]pyridmidine-5,7-diamine;
 - $2-furan-2-yl-N^5-(1-furan-2-ylmethyl-pyrrolidin-2-ylmethyl]-[1,2,4]triazolo[1,5-1,2]-[1,2,4]triazolo[1,5-1,2]-[1,2,4]triazolo[1,5-1,2]-[1,2,4]-[1,2,$
 - a]pyridmidine-5,7-diamine;
 - $N^5\hbox{-}[1\hbox{-}(2,5,\hbox{-}difluoro\hbox{-}benzyl)\hbox{-}pyrrolidin\hbox{-}2\hbox{-}ylmethyl]\hbox{-}2\hbox{-}furan\hbox{-}2\hbox{-}yl\hbox{-}[1,2,4]triazolo[1,5]$
 - a]pyrimidine-5,7-diamine;
 - 2-furan-2-yl-N⁵-(1-(2,3,6-trifluorobenzyl)-pyrrolidin-2-ylmethyl)-[1,2,4]triazolo[1,5-
 - a)pyrimidine-5,7-diamine;
 - N⁵-[1-(2-chloro-pyridin-4-ylmethyl)-pyrrolidin-2-ylmethyl)-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;
 - 1-(7-amino-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-5-ylethynyl)-pentanol;
 - 1-(7-amino-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-5-ylethynyl)-cyclohexanol;
 - 5-(3-cyclohexyl-prop-1-ynyl)-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine;

 $\label{eq:continuous} 5-\{3-[4-(2,4-difluoro-phenyl)-piperaziny-1-yl]prop-1-ynyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{2-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{2-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{2-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{2-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl]-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl]-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl]-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine; \\ N^5-\{3-[4-(2,4-difluoro-phenyl)-piperziny-1-ylamine; \\ N^5-\{3-[4-(2,$

a]pyrimidin-7-ylamine; 2-furan-2-yl-N⁵-{2-[4-(2,4,6-trifluorophenyl)-piperaziny-1-yl]-ethyl}-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -{2-[4-(2,3-difluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 $2-furan-2-yl-N^5-\{2-[4-(2,3,6-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;$

 N^5 -{2-[4-(2-fluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -{2-[4-(4-fluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 N^5 -{2-[4-(3,5-dichlorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; and

2-furan-2-yl-N⁵-{2-[4-(2,3,4-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine.

32. (Original) The compound of claim 1, said compound being

2-furan-2-yl-N⁵-[1-(5-methyl-isoxazol-3-ylmethyl)-pyrrolidin-2-ylmethyl]-

[1,2,4]triazolo[1,5-a]pyridmidine-5,7-diamine;

2-furan-2-yl-N⁵-methyl-N⁵-[1-(5-methyl-isoxazol-3-ylmethyl)-pyrrolidin-2-ylmethyl]-[1,2,4]triazolo[1,5-a]pyridmidine-5,7-diamine;

N⁵-[1-(2,5-difluoro-benzyl)-pyrrolidin-2-ylmethyl]-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

5-(3-cyclohexyl-prop-1-ynyl)-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine;

 $5-\{3-[4-(2,4-difluoro-phenyl)-piperaziny-1-yl]prop-1-ynyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine;$

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 $N^5-\{2-[4-(2,4-difluoro-phenyl)-piperziny-1-yl]ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidin-7-ylamine;$

 $2-furan-2-yl-N^5-\{2-[4-(2,4,6-trifluorophenyl)-piperaziny-1-yl]-ethyl\}-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;$

 N^5 -{2-[4-(2-fluorophenyl)-piperazin-1-yl]-ethyl}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine;

 $N^5-\{2-[4-(3,5-dichlorophenyl)-piperazin-1-yl]-ethyl\}-2-furan-2-yl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine; and$

2-furan-2-yl- N^5 - $\{2$ -[4-(2,3,4-trifluorophenyl)-piperazin-1-yl]-ethyl-[1,2,4]triazolo[1,5-a]pyrimidine-5,7-diamine.

- 33. (Original) A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier.
- 34. (Original) A pharmaceutical composition comprising a compound of claim 30 and a pharmaceutically acceptable carrier.

35-46. (Canceled)

- 47. (Previously Presented) The compound of claim 10, wherein X^1 is C_{1-6} alkylene, C_{2-6} alkynylene or a bond.
- 48. (Previously Presented) The compound of claim 47, wherein R² is hydrogen or alkyl.
- 49. (Previously Presented) The compound of claim 48, wherein X^2 is C_{1-6} alkylene or a bond.
- 50. (Previously Presented) The compound of claim 49, wherein Y is –SO₂-, -CO-, -CO₂-, or a bond.

- 51. (Previously Presented) The compound of claim 50, wherein R¹ is alkyl, cycloalkyl, aryl, heterocycloalkyl, or heteroaryl.
- 52. (Previously Presented) The compound of claim 51, wherein R¹ is a substitued aryl (e.g., 2,4-difluorophenyl).
- 53. (Previously Presented) The compound according to claim 10, wherein X^1 is C_{1-6} alkylene, C_{2-6} alkynylene or a bond; Y is $-SO_2$ -, -CO-, $-CO_2$ -, or a bond; R^1 is alkyl, cycloalkyl, aryl, heterocycloalkyl, or heteroaryl; and X^2 is C_{1-6} alkylene or a bond.